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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/708,075      | 02/06/2004  | HAOMING LI           | 22.1547             | 2074             |

35204 7590 09/25/2006

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| EXAMINER |
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COLLINS, GIOVANNA M

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| ART UNIT | PAPER NUMBER |
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3672

DATE MAILED: 09/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |  |                                  |  |
|------------------------------|--|----------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/708,075   | <b>Applicant(s)</b><br>LI ET AL. |  |
|                              | <b>Examiner</b><br>Giovanna M. Collins | <b>Art Unit</b><br>3672          |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 10-12, 18 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 13-16 and 20 is/are rejected.
- 7) ☒ Claim(s) 3-9 and 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received:
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claim 2 is rejected under 35 U.S.C. 102(b) as being anticipated by Lussier et al. 5,648,635.

Referring to claim 2, Lussier disclose an adapter comprising a holder mechanism (34) adapted to receive a first shaped charge (24) and a loading tube (76) having a mounting mechanism (102) adapted to connect the first charge to a loading tube, the loading tube formed to receiving a second shaped charge having a selected size large that the first shaped charge and the holder mechanism being configure for connection to the mounting mechanism for mounting the first shaped char in the loading tube.

2. Claims 15-16 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Lindsay 2926603.

Referring to claims 15 and 20, Lindsay discloses (see fig. 2) a housing assembly (46,35) having an upper section (at 35) and lower section (at 46) connectable together to define an outer surface and an inner bore, the outer surface adapted to engage the

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inner surface of the jacket and having a selected size approximately the same as the size of the second shaped charge and the inner bore adapted to receive the first shaped charge (45) and a fastening mechanism (narrow fit at element 37) for connecting the housing assembly to the jacket to the loading tube.

Referring to claim 16, Lindsay discloses a groove (at 63) formed in the lower section (46) to receive a detonating cord and an opening (at 54) to establish communication between the shaped charge and the detonating cord.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kneisl et al. 2002/0189482 in view of Lussier '635.

Kneisl discloses (fig. 1) an apparatus for use in perforation a wellbore, comprising a loading tube (22) with a jacket (24) but does not disclose an adapter. Lussier teaches an adapter is a well known accessory for a shaped charge (see fig. 2b, at 34 and col. 6, lines 46-47). As an adapter is a well accessory for a shaped, it would

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be obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus disclosed by Kneisl to have an adapter in view of the teachings of Lussier.

Referring to claim 14, Kneisl discloses a method for loading a small shaped charge in standard loading tube comprising providing a standard loading tube (23) with a standard jacket (24). Kneisl does not disclose inserting the shaped charge into an adapter and installing the adapter into the loading tube. Lussier teaches an adapter is a well known accessory for a shaped charge (see fig. 2b, at 34 and col. 6, lines 46-47). As an adapter is a well accessory for a shaped charge, it would be obvious to one of ordinary skill in the art at the time of the invention to modify the method disclosed by Kneisl to insert the shaped charge into an adapter and install the adapter into the loading tube in view of the teachings of Lussier.

4. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lussier '635 in view of Kneisl et al. 2002/0189482.

Lussier discloses a method for use in wellbore perforating operation comprising using a holder (34) to mount a shaped charge of a selected size into a loading tube. Lussier does not disclose a jacket. Kneisl teaches a jacket is well known in the art (see fig. 1). As a loading tube having a jacket is well known in the art, it would be obvious to one of ordinary skill in the art at the time of the invention to modify the method disclosed by Lussier to insert the shaped charge into a standard jacket of a loading tube in view of the teachings of Kneisl.

***Allowable Subject Matter***

5. Claims 3-9, and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

Applicant's arguments filed 6/26/06 have been fully considered but they are not persuasive. Referring to the applicant's argument concerning rejection of claim 2 in view of Lussier, the applicant argues the Lussier reference does not disclose a holder mechanism or a mounting mechanism. However, Lussier does disclose a holding mechanism (34) and a mounting mechanism (102).

Applicant's arguments with respect to claims 1, and 13-16 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Giovanna M. Collins whose telephone number is 571-272-7027. The examiner can normally be reached on 6:30-3 M-F.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
gmc

  
Jennifer H. Gay  
Primary Examiner